

Amendments to the Specification:

Please amend paragraph [0022] by replacing the table as follows:

[0022] FIG. 8 [[is a graph]] includes graphs showing an MR ratio (FIG. 8a), a free layer coercive force H_{cf} (FIG. 8b), and an interlayer coupling magnetic field H_{int} (FIG. 8c) when changing magnetic domain control underlayer, pretreatment for underlayer deposition, and underlayer;

Please amend paragraph [0023] by replacing the table as follows:

[0023] FIG. 9 (which includes FIGS. 9(a), 9(b), 9(c), 9(d), and [[9(d)]] 9(e)) is a view explaining an operation principle regarding a transfer curve;

Please amend paragraph [0025] by replacing the table as follows:

[0025] FIG. 11 (which includes FIGS. 11a and 11b) is a view comparing the transfer curve characteristic values of the sensor portions for the magnetoresistive head of the invention and that of the prior art;

Please amend paragraph [0043] by replacing the table as follows:

[0043] FIG. 8 [[is a graph]] includes graphs showing the result of measuring the MR ratio (FIG. 8a), the free layer coercive force H_{cf} (FIG. 8b) and the interlayer coupling magnetic field H_{int} (FIG. 8c) when the magnetic domain control underlayer, the pretreatment for the underlayer deposition or the underlayer were changed respectively in a sample obtained by forming successively a magnetic domain control underlayer and a multi-layered film (underlayer, anti-ferromagnetic layer, pinned layer, non-magnetic layer, free layer, and cap layer) from below on an AlTiC substrate in which an Al₂O₃ protection film is formed on the surface and an Al₂O₃ - SiO₂ compound is stacked.

Please amend paragraph [0045] by replacing the table as follows:

[0045] Table 2

| Sample No. | Magnetic domain control underlayer | Pretreatment for underlayer deposition | Underlayer |
|------------|------------------------------------|---|---|
| 1 | - | Atmospheric exposure | Underlayer A |
| 2 | Cr 10 nm | Atmospheric exposure | Underlayer A |
| 3 | Cr 10 nm | Atmospheric exposure | Ta 1 nm → Atmospheric exposure → underlayer A |
| 4 | Cr 10 nm | Atmospheric exposure → plasma oxidation | Underlayer A |
| 5 | Cr 10 nm | Atmospheric exposure → plasma oxidation | Ta 1 nm → Atmospheric exposure → underlayer A |

| Sample No. | Magnetic domain control underlayer | Pretreatment for underlayer deposition | Underlayer |
|------------|------------------------------------|--|---|
| 1 | - | Atmospheric exposure | Underlayer A |
| 2 | Cr 10 nm | Atmospheric exposure | Underlayer A |
| 3 | Cr 10 nm | Atmospheric exposure | Ta 1 nm Atmospheric exposure underlayer A |
| 4 | Cr 10 nm | Atmospheric exposure plasma oxidation | Underlayer A |
| 5 | Cr 10 nm | Atmospheric exposure plasma oxidation | Ta 1 nm Atmospheric exposure underlayer A |

Please amend paragraph [0052] by replacing the table as follows:

[0052] FIG. 9 (which includes FIGS. 9(a), 9(b), 9(c), 9(d), and [[9(d)]] 9(e)) shows an operation principle regarding the transfer curve. The external magnetic field is applied in the direction (hMR direction) perpendicular to the direction of the track width (Tw direction), and the magnetic resistance is measured (see FIG. 9(e)). Measurements obtained is shown as ΔV -H waveform in FIG. 9(a). The magnetic resistance becomes minimum when the magnetizing direction of the free layer is directed to the direction identical with the magnetizing direction of the pinned layer by the external magnetic field (FIG. 9(b)). The magnetic resistance becomes maximum when the magnetizing direction of the free layer is directed to the direction opposite to the magnetizing direction of the pinned layer by the external magnetic field (FIG. 9(d)). When the external magnetic field is zero, the magnetic

charges in the free layer have to be perpendicular to the magnetizing direction imposed on the pinned layer by the bias magnetic field, and the induced magnetic field anisotropy added to the free layer (FIG. 9(c)). In this case, the magnetic resistance is at an intermediate value between the maximum value and the minimum value.

Please amend paragraph [0056] by replacing the table as follows:

[0056] FIG. 11 [[is a graph]] includes graphs showing the result of measurement for V_{hc} (FIG. 11a) and ΔR (FIG. 11b) when a transfer curve was evaluated for the magnetoresistive head according to the invention shown in FIG. 1 while changing the residual magnetization B_{rt} . For the magnetoresistive head used for measurement, the magnetic domain control underlayer was formed by using Cr and the magnetic domain control film was formed by using CoCrPt.